

In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1-31 (Canceled)

32. (New) A method of inducing an antigen specific immune response in a subject comprising

administering to the subject an expression plasmid vector capable of expressing a hepatitis B virus antigen in an effective amount to induce an antigen specific immune response against hepatitis B virus antigen.

33. The method of claim 32, wherein administration of said vector is conducted at least five days after administration of at least one substance capable of inducing a coagulating necrosis of muscle fibers and wherein said administration of said vector and said substance is about in the same area.

34. The method of claim 33, wherein said substance is bupivacaine.

35. The method of claim 34, wherein the vector is administered at least 7 days after the administration of bupivacaine.

36. The method of claim 32, wherein the administration is carried out by intramuscular injection.

37. The method according to claim 36, wherein the intramuscular injection is carried out using a liquid jet gun.

38. The method of claim 32, wherein the vector includes a promoter that is endogenous to hepatitis B virus.

40. The method of claim 32, wherein the antigen is a protein or antigenic portion thereof selected from the group consisting of major/small envelope protein (S), middle envelope protein (S₂-S), and large envelope protein (S₁-S₂-S).

41. The method of claim 40, wherein the gene encodes the S protein.

42. The method of claim 32, wherein the vector includes a viral promoter.

43. The method of claim 42, wherein the vector includes a cytomegalovirus promoter.

44. The method of claim 32, wherein the vector includes a mammalian promoter.

45. The method of claim 32, wherein the vector is pCMV-HB-S1.S.S deposited with the CNM under No. I-1411.

46. The method of claim 32, wherein the vector is pCMV-HB-S2.S deposited with the CNM under No. I-1410.

47. The method of claim 32, wherein the vector is pRSV-HBS deposited with the CNM under No. I-1371.

48. The method of claim 32, wherein the vector is pHBV-S1.S2.S deposited with the CNM under No. I-1409.

49. A plasmid vector comprising a promoter selected from the group consisting of rous sarcoma virus (RSV) and cytomegalovirus (CMV) and a gene encoding a hepatitis B virus antigen.

50. The vector of claim 49, wherein the hepatitis B virus antigen is a protein or antigenic portion thereof selected from the group consisting of major/small envelope protein (S), middle envelope protein (S₂-S), and large envelope protein (S₁-S₂-S).

51. The vector of claim 49, wherein the vector is pCMV-HB-S1.S.S deposited with the CNCM under No. I-1411.

46. The vector of claim 49, wherein the vector is pCMV-HB-S2.S deposited with the CNCM under No. I-1410.

47. The vector of claim 49, wherein the vector is pRSV-HBS deposited with the CNCM under No. I-1371.

48. The vector of claim 49, wherein the vector is pHBV-S1.S2.S deposited with the CNCM under No. I-1409.